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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/006,608	11/30/2001	Michael Neal	DEM1P008	1143

36088 7590 03/17/2006

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EXAMINER	
CANGIALOSI, SALVATORE A	

ART UNIT	PAPER NUMBER
3621	

DATE MAILED: 03/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No. 10/006,608	Applicant(s) NEAL ET AL.	
	Examiner Salvatore Cangialosi	Art Unit 3621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 December 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-14 and 16-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 3-14, 16-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 10/6/05.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

1. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
>
> Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

2. Claims 1, 3-14, 16-25 are rejected under 35 U.S.C. § 103 as being unpatentable over Ouimet et al (6094641) in view of Hartman et al (5987425) and either Delurgio et al (6553352) or Smith ("A General Bayesian Linear Model"(4/72)), all cited by the applicants and Vanderbei and Joslin et al(6272483)(newly cited).

Regarding claim 1, Ouimet et al (See abstract, Figs. 1- 6, Col. 2, lines 55-65, Col. 4, lines 35-60, claims 1, 12 and 21) disclose a means for optimizing the price of an item based on a selected demand model employing a grid (See Fig. 6)to set price in an automated fashion in a digital computer substantially as claimed. The differences between the above and the claimed invention is the use of a specific model and product

subsets. It is noted that it is believed that the price is always determined for a subset of items that is functionally equivalent to the claimed limitations. Hartman et al (See abstract, and Fig. 1 show product subsets that is the functional equivalent of the claimed limitations. Delurgio et al (See abstract and claim 34) or Smith show Bayesian models employed in optimization of price (note that these are but a few of the cited references employing Bayesian models in price optimization. Vanderbei (See Figs. 2, 5, and 6, Col. 11, lines 35-50) show integer problem solution as being an old and obvious price optimization mathematical solution in price modeling. Joslin et al (See abstract, Figs. 1-3, Col. 5. lines 15-25, Col. 6, lines 35-45, Col. 11, lines 5-45) show optimal linear programming solutions of the pricing problem employing subsets and relaxation. It is noted that the newly added limitations merely describe standard linear programming solution for optimization. It would have been obvious to the person having ordinary skill in this art to provide a similar arrangement for Ouimet et al because the suggestion to employ any demand model(col. 2, line 60) teaches that all models are conventional functional equivalents with respect to the claim limitations in price optimization. Regarding selection limitations of claim 3, Delurgio et al(Col. 11, lines 20 -30) show product mix selection which is a functional equivalent of the claim limitations. Regarding optimization limitations of claim 4, Ouimet et al (See

abstract, Figs. 1- 6, Col. 2, lines 55-65, Col. 4, lines 35-60, claims 1, 12 and 21) disclose a means for optimizing the price of an item based on a selected demand model employing a grid (See Fig. 6)to set price which are the functional equivalents of the claim limitations. Regarding the data limitations of claim 5, Ouimet et al (See abstract, Figs. 1- 6, Col. 2, lines 55-65, Col. 4, lines 35-60, claims 1, 12 and 21) disclose a means for optimizing the price of an item based on a selected demand model employing a grid (See Fig. 6)to set price including prior price history which is a functional equivalent of the claim limitations. Regarding the data limitations of claim 6, Ouimet et al (See abstract, Figs. 1- 6, Col. 2, lines 55-65, Col. 4, lines 35-60, claims 1, 12 and 21) disclose a means for optimizing the price of an item based on a selected demand model employing a grid (See Fig. 6)to set price including prior price history which is a functional equivalent of the claim limitations. Regarding the rule limitations of claim 7, Delurgio et al(Figs. 14, 34-38) show rule criteria including a rule generator(elements 416-420) which is a functional equivalent of the claim limitations. Regarding the rule limitations of claim 8, Delurgio et al(Figs. 14, 34-38) show rule criteria including a rule generator(elements 416-420) which is a functional equivalent of the claim limitations. Regarding optimization limitations of claim 9, Ouimet et al (See abstract, Figs. 1- 6, Col. 2, lines 55-65, Col. 4, lines 35-60, claims 1, 12 and 21) disclose a means for

optimizing the price of an item based on a selected demand model employing a grid (See Fig. 6)to set price which are the functional equivalents of the claim limitations. Regarding the data limitations of claim 10, Ouimet et al (See abstract, Figs. 1- 6, Col. 2, lines 55-65, Col. 4, lines 35-60, claims 1, 12 and 21) disclose a means for optimizing the price of an item based on a selected demand model employing a grid (See Fig. 6)to set price including prior price history which is a functional equivalent of the claim limitations. Regarding the data limitations of claim 11, Ouimet et al (See abstract, Figs. 1- 6, Col. 2, lines 55-65, Col. 4, lines 35-60, claims 1, 12 and 21) disclose a means for optimizing the price of an item based on a selected demand model employing a grid (See Fig. 6) to set price including prior price history which is a functional equivalent of the claim limitations. Regarding the rule limitations of claim 12, Delurgio et al(Figs. 14, 34-38) show rule criteria including a rule generator(elements 416-420) which is a functional equivalent of the claim limitations. Regarding claim 1, Ouimet et al (See abstract, Figs. 1- 6, Col. 2, lines 55-65, Col. 4, lines 35-60, claims 1, 12 and 21) disclose a means for optimizing the price of an item based on a selected demand model employing a grid (See Fig. 6)to set price in an automated fashion in a digital computer substantially as claimed. The differences between the above and the claimed invention is the use of a specific model and product subsets. It is noted that it is believed that the price is

always determined for a subset of items that is functionally equivalent to the claimed limitations. Hartman et al (See abstract, and Fig. 1 show product subsets that is the functional equivalent of the claimed limitations. Delurgio et al (See abstract and claim 34) or Smith show Bayesian models employed in optimization of price (note that these are but a few of the cited references employing Bayesian models in price optimization. Vanderbei (See Figs. 2, 5, and 6, Col. 11, lines 35-50) show integer problem solution as being an old and obvious price optimization mathematical solution in price modeling. Joslin et al (See abstract, Figs. 1-3, Col. 5. lines 15-25, Col. 6, lines 35-45, Col. 11, lines 5-45) show optimal linear programming solutions of the pricing problem employing subsets and relaxation. It is noted that the newly added limitations merely describe standard linear programming solution for optimization. It would have been obvious to the person having ordinary skill in this art to provide a similar arrangement for Ouimet et al because the suggestion to employ any demand model(col. 2, line 60) teaches that all models are conventional functional equivalents with respect to the claim limitations in price optimization. Regarding selection limitations of claim 16, Delurgio et al(Col. 11, lines 20 -30) show product mix selection which is a functional equivalent of the claim limitations. Regarding optimization limitations of claim 17, Ouimet et al (See abstract, Figs. 1- 6, Col. 2, lines 55-65, Col. 4, lines 35-60,

claims 1, 12 and 21) disclose a means for optimizing the price of an item based on a selected demand model employing a grid (See Fig. 6)to set price which are the functional equivalents of the claim limitations. Regarding the data limitations of claim 18, Ouimet et al (See abstract, Figs. 1- 6, Col. 2, lines 55-65, Col. 4, lines 35-60, claims 1, 12 and 21) disclose a means for optimizing the price of an item based on a selected demand model employing a grid (See Fig. 6)to set price including prior price history which is a functional equivalent of the claim limitations. Regarding the data limitations of claim 19, Ouimet et al (See abstract, Figs. 1- 6, Col. 2, lines 55-65, Col. 4, lines 35-60, claims 1, 12 and 21) disclose a means for optimizing the price of an item based on a selected demand model employing a grid (See Fig. 6)to set price including prior price history which is a functional equivalent of the claim limitations. Regarding the rule limitations of claim 20, Delurgio et al(Figs. 14, 34-38) show rule criteria including a rule generator(elements 416-420) which is a functional equivalent of the claim limitations. Regarding claim 21, Ouimet et al (See abstract, Figs. 1- 6, Col. 2, lines 55-65, Col. 4, lines 35-60, claims 1, 12 and 21) disclose a means for optimizing the price of an item based on a selected demand model employing a grid (See Fig. 6)to set price in an automated fashion in a digital computer substantially as claimed. The differences between the above and the claimed invention is the use of a specific model and product subsets. It

is noted that it is believed that the price is always determined for a subset of items that is functionally equivalent to the claimed limitations. Hartman et al (See abstract, and Fig. 1 show product subsets that is the functional equivalent of the claimed limitations. Delurgio et al (See abstract and claim 34) or Smith show Bayesian models employed in optimization of price (note that these are but a few of the cited references employing Bayesian models in price optimization. Vanderbei (See Figs. 2, 5, and 6, Col. 11, lines 35-50) show integer problem solution as being an old and obvious price optimization mathematical solution in price modeling. Joslin et al (See abstract, Figs. 1-3, Col. 5. lines 15-25, Col. 6, lines 35-45, Col. 11, lines 5-45) show optimal linear programming solutions of the pricing problem employing subsets and relaxation. It is noted that the newly added limitations merely describe standard linear programming solution for optimization. It would have been obvious to the person having ordinary skill in this art to provide a similar arrangement for Ouimet et al because the suggestion to employ any demand model(col. 2, line 60) teaches that all models are conventional functional equivalents with respect to the claim limitations in price optimization. Regarding claim 22, Ouimet et al (See abstract, Figs. 1- 6, Col. 2, lines 55-65, Col. 4, lines 35-60, claims 1, 12 and 21) disclose a means for optimizing the price of an item based on a selected demand model employing a grid (See Fig. 6)to set price in an automated fashion in a

digital computer substantially as claimed. The differences between the above and the claimed invention is the use of a specific model and product subsets. It is noted that it is believed that the price is always determined for a subset of items that is functionally equivalent to the claimed limitations. Hartman et al (See abstract, and Fig. 1 show product subsets that is the functional equivalent of the claimed limitations. Delurgio et al (See abstract and claim 34) or Smith show Bayesian models employed in optimization of price (note that these are but a few of the cited references employing Bayesian models in price optimization. Vanderbei (See Figs. 2, 5, and 6, Col. 11, lines 35-50) show integer problem solution as being an old and obvious price optimization mathematical solution in price modeling. Joslin et al (See abstract, Figs. 1-3, Col. 5. lines 15-25, Col. 6, lines 35-45, Col. 11, lines 5-45) show optimal linear programming solutions of the pricing problem employing subsets and relaxation. It is noted that the newly added limitations merely describe standard linear programming solution for optimization. It would have been obvious to the person having ordinary skill in this art to provide a similar arrangement for Ouimet et al because the suggestion to employ any demand model(col. 2, line 60) teaches that all models are conventional functional equivalents with respect to the claim limitations in price optimization. Regarding claim 23, Ouimet et al (See abstract, Figs. 1- 6, Col. 2, lines 55-65, Col. 4, lines 35-60,

claims 1, 12 and 21) disclose a means for optimizing the price of an item based on a selected demand model employing a grid (See Fig. 6)to set price in an automated fashion in a digital computer substantially as claimed. The differences between the above and the claimed invention is the use of a specific model and product subsets. It is noted that it is believed that the price is always determined for a subset of items that is functionally equivalent to the claimed limitations. Hartman et al (See abstract, and Fig. 1 show product subsets that is the functional equivalent of the claimed limitations. Delurgio et al (See abstract and claim 34) or Smith show Bayesian models employed in optimization of price (note that these are but a few of the cited references employing Bayesian models in price optimization. Vanderbei (See Figs. 2, 5, and 6, Col. 11, lines 35-50) show integer problem solution as being an old and obvious price optimization mathematical solution in price modeling. Joslin et al (See abstract, Figs. 1-3, Col. 5. lines 15-25, Col. 6, lines 35-45, Col. 11, lines 5-45) show optimal linear programming solutions of the pricing problem employing subsets and relaxation. It is noted that the newly added limitations merely describe standard linear programming solution for optimization. It would have been obvious to the person having ordinary skill in this art to provide a similar arrangement for Ouimet et al because the suggestion to employ any demand model(col. 2, line 60) teaches that all models are conventional functional

equivalents with respect to the claim limitations in price optimization. Regarding claim 24, Ouimet et al (See abstract, Figs. 1- 6, Col. 2, lines 55-65, Col. 4, lines 35-60, claims 1, 12 and 21) disclose a means for optimizing the price of an item based on a selected demand model employing a grid (See Fig. 6)to set price in an automated fashion in a digital computer substantially as claimed. The differences between the above and the claimed invention is the use of a specific model and product subsets. It is noted that it is believed that the price is always determined for a subset of items that is functionally equivalent to the claimed limitations. Hartman et al (See abstract, and Fig. 1 show product subsets that is the functional equivalent of the claimed limitations. Delurgio et al (See abstract and claim 34) or Smith show Bayesian models employed in optimization of price (note that these are but a few of the cited references employing Bayesian models in price optimization. Vanderbei (See Figs. 2, 5, and 6, Col. 11, lines 35-50) show integer problem solution as being an old and obvious price optimization mathematical solution in price modeling. Joslin et al (See abstract, Figs. 1-3, Col. 5. lines 15-25, Col. 6, lines 35-45, Col. 11, lines 5-45) show optimal linear programming solutions of the pricing problem employing subsets and relaxation. It is noted that the newly added limitations merely describe standard linear programming solution for optimization. It would have been obvious to the person having ordinary skill in

this art to provide a similar arrangement for Ouimet et al because the suggestion to employ any demand model(col. 2, line 60) teaches that all models are conventional functional equivalents with respect to the claim limitations in price optimization. Regarding the function limitations of claim 25, Delurgio et al(Figs. 14, 34-38) show rule criteria including a rule generator(elements 416-420) which is a functional equivalent of the claim limitations.

Examiner's Note: Although Examiner has cited particular columns, line numbers and figures in the references as applied to the claims above for the convenience of the applicant(s), the specified citations are merely representative of the teaching of the prior art that are applied to specific limitations within the individual claim and other passages and figures may apply as well. It is respectfully requested that the applicant(s), in preparing the response, fully consider the items of evidence in their entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

Applicants arguments filed 12/30/2005 are moot due the new ground of rejection. The claims are no more than obvious mathematical solutions by linear programming of the pricing optimization problem by constraint relaxation.

3. 35 USC 101 reads as follows:

"Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter or any new and useful improvement thereof, may obtain a patent therefore, subject to the conditions and requirements of this title".

4. Claim 22 is rejected under 35 USC 101 because the claimed invention is directed to non-statutory subject matter.

The claim does not present a concrete, tangible or useful result.

Claim 22 is outside the four statutory classes of invention since they are recite an electromagnetic signal. Claims that recite nothing but the physical characteristics of a form of energy, such as a frequency, voltage , or the strength of a magnetic field, define energy or magnetism, per se and as such are nonstatutory phenomena(O'Reilly, 56 US(15 How.) at 112-114). Moreover, it does not appear that the claim reciting a signal encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in 35 USC 101. First, a claimed signal is not a process under 35 USC 101 because it is not a series of steps. The claimed signal has no physical structure, does not itself perform any useful, concrete and tangible result and, this, does not fit within the definition of a machine. The claimed signal is not matter, but a form of energy, and therefore is not a composition of matter. The claimed signal, a form of energy, does not fall within either of the two accepted definition of a manufacture which require either a physical substance or physical substance which a signal does not have. The claimed carrier wave signal falls outside the four statutory classes of invention.

Any inquiry concerning this communication should be directed to Salvatore Cangialosi at telephone number **(571) 272-6927**. The examiner can normally be reached 6:30 Am to 5:00 PM, Tuesday through Friday. If attempts to reach the examiner by telephone

are unsuccessful, the examiner's supervisor, James Trammell, can be reached at **(571) 272-6712**.

Any response to this action should be mailed to:

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